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The Civil Works Program of the Army Corps of Engineers: A Primer

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Summary

The U.S. Army Corps of Engineers (Corps) is an Executive Branch agency within the Department of Defense. At the direction of Congress primarily through Water Resources Development Acts (WRDA), the Corps undertakes water resources development projects under its civil works program. The Corps mission has expanded beyond the original responsibility of improving and maintaining navigable channels; it now includes flood control, disaster relief, environmental restoration, municipal water infrastructure, and other activities. The non-federal sponsors and the federal government (through the annual Energy and Water Development Appropriations Acts) share the cost of most Corps projects. This report outlines the agency's organization, project development process, civil works appropriations, and evolution of its responsibilities. There are no plans to update this overview report.

Corps of Engineers and its Civil Works Program

The U.S. Army Corps of Engineers (Corps) is an Executive Branch agency located in the Department of Defense that has military and civilian responsibilities. The military program provides engineering, construction, and environmental management services for Department of Defense agencies. Under its civil works program at the direction of Congress, the Corps plans, constructs, operates, and maintains a wide range of water facilities.

The civil works program is headed by a civilian Assistant Secretary of the Army for Civil Works. A military Chief of Engineers oversees the Corps' civil and military operations and reports on civil works matters to the Assistant Secretary for Civil Works. The Corps operates as a military organization with a largely civilian workforce (34,600 civilian and 650 military personnel). Eight divisions throughout the nation coordinate

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projects in 41 district offices in the United States and field offices worldwide.¹ Projects are largely planned at the district level and approved at the division and headquarters levels.

The Corps' oldest civil responsibilities are creating navigable channels and flood control projects. Navigation projects include river deepening, channel widening, lock expansion, dam operations, and dredged material disposal. Flood control projects include dam and related hydropower construction, levee construction, river channelization, large-scale pumping systems, and coastal protection. Many navigation and flood control projects are multi-purpose — that is, they provide water supply, recreation, and hydropower in addition to navigation or flood control.

In recent decades, Congress has given the Corps responsibilities in the areas of environmental restoration and infrastructure and other non-traditional activities, such as disaster relief and remediation of formerly used nuclear sites. Environmental restoration activities involve wetlands restoration and environmental mitigation activities for Corps facilities. Environmental infrastructure refers to municipal water and wastewater facilities. The agency's regulatory responsibility for navigable waters extends to issuing permits for private actions that might affect wetlands and other waters of the United States.² The economic and environmental impact of Corps projects and the agency's regulatory activities can be significant locally and regionally and at times are quite controversial.

Project Development Process

The Corps currently follows a two-phase planning process that is intended to provide sufficient information to determine if a water resources project warrants federal investment. Project development is directed by *Principles and Guidelines for Water and Related Resources Implementation Studies* (P&G), prepared by the Water Resources Council (WRC) in 1983 to guide federal water resource development.³ Projects generally originate with a request for assistance from a community (e.g., citizens or businesses) or local government entity with a water resource need that is beyond its capability to alleviate.

The Corps generally requires two types of congressional authority to initiate a study — study authorization, then appropriations.⁴ A study authority allows the Corps to

¹ Division and district maps available at [<http://www.usace.army.mil/divdistmap.html>].

² Sections 10 and 13 of the Rivers and Harbors Act of 1899 (33 U.S.C. 407) require that a permit be obtained from the Corps for alteration or obstruction of and refuse discharge in navigable waters of the United States. The Corps also has regulatory responsibilities under other laws, notably Section 404 of the Clean Water Act (33 U.S.C. 1344). Since the mid-1907s, court decisions have significantly broadened the interpretation of navigable waters. Subsequent judicial and administrative actions have altered the jurisdictional reach of the Corps' regulatory program considerably from the Corps' earlier interpretation.

³ WRC was established pursuant to the 1965 Water Resources Planning Act (42 U.S.C. 1962-b2); it is currently dormant due to a lack of funding.

⁴ Technical assistance and some small projects can be conducted under the Corps' Continuing
(continued...)

investigate a problem and determine if there is a federal interest in proceeding further. If the Corps has performed a study in the geographic area before, a new study can be authorized by a resolution (known commonly as a “survey resolution”) of either the House Transportation and Infrastructure Committee or the Senate Environment and Public Works Committee. If the Corps has not previously investigated the area, the study needs to be authorized in an act of Congress, typically a Water Resources Development Act (WRDA), which often occurs biennially.⁵ The majority of Corps studies are currently authorized by survey resolutions.

Once authorized, appropriations for Corps studies are sought through the annual Energy and Water Development Appropriations Acts. The objective of Corps studies is to guide the decision to authorize a Corps project for construction. Early in the study process, the Corps assesses the level of interest and support of non-federal entities that may be potential sponsors. Non-federal sponsors are state, tribal, county, or local agencies or governments that join the Corps in the effort.

Based on the results of the study, the Chief of Engineers may sign a final recommendation on the project, known as the Chief’s Report. In recent years, Congress has used a favorable Chief’s Report as the basis for authorizing projects. Once authorized, federal funds for project construction can be sought through the annual Energy and Water Development Appropriations bills. For more information on the phases of the project development process, see CRS Report RL32064, *Army Corps of Engineers Water Resources Activities: Authorization and Appropriations*, by Nicole T. Carter.

Civil Works Appropriations

Congress provides federal appropriations to the Corps primarily for specific projects.⁶ For much of the agency’s history, most studies and construction for navigation and flood control were entirely federally funded. Since 1986, most projects include financial participation by local project sponsors. Fiscal priorities and public attitudes in recent decades have produced a decline in federal funding for water resources development projects generally. Over the past 30 years, the Corps has experienced budget declines in real dollar amounts for construction. From the mid-1960s to the late 1990s, the annual funding for the general construction account fell from an average of \$4 billion

⁴ (...continued)

Authorities Programs without obtaining a study authorization or specific appropriations. They are performed at the Corps’ discretion based on the availability of funds. The Continuing Authorities Programs include beach erosion, navigation, flood control, streambank and shoreline protection, snagging and clearing, modifications to existing projects for the benefit of the environment, and aquatic ecosystem restoration.

⁵ These biennial acts are commonly distinguished from each other by including a reference to the year of enactment; for example, WRDA 1986 refers to the act passed in 1986.

⁶ In addition to the activities that the Corps performs using appropriations that it receives through direct federal appropriations, the Corps performs reimbursable work for Department of Defense agencies, other federal agencies (e.g., U.S. Environmental Protection Agency), local governments, tribes, U.S. territories, foreign governments, and international organizations. In FY2002, this work totaled \$953 million. More information on the Interagency and International Program of the Corps is available at [<http://www.hq.usace.army.mil/cemp/cn/iishmpg.htm>].

to \$1.4 billion (in 1999 dollars).⁷ This drop in funding largely reflects the change in public attitudes toward large water resources projects.

Funding for the civil works program has often been a contentious issue between the Administration and Congress, with final appropriations typically providing more funding than requested regardless of which political party controls the White House and Congress. The Corps generally maintains strong congressional support because of the direct water resource benefits and indirect economic and political benefits of its projects.

Project Cost-Sharing

How to allocate the cost of Corps projects among non-federal sponsors and the federal government has been debated for decades. The 1986 WRDA significantly increased local cost-share requirements; some subsequent WRDAs made further adjustments in cost-sharing.⁸ Under current requirements, reconnaissance studies are entirely a federal expense. Local sponsors pay 50% of the cost for feasibility studies, except for inland waterways (100% federal responsibility).⁹

The division of federal and non-federal financial responsibilities for construction and operation and maintenance (O&M) vary by project purpose as shown in Table 1. In most cases, cost-sharing for pre-construction planning and engineering is determined using the construction requirements in Table 1. An ability-to-pay test can be applied to some activity types, such as flood control and agricultural water supply, and may result in a greater federal share than shown in the table.¹⁰ Congress may also waive cost-share requirements for specific projects.

⁷ Information provided by the Corps to Senator Voinovich at his request; available in Senator George V. Voinovich, “Statement,” *Corps of Engineers Mission and Backlog of Projects*, Hearing before Subcommittee on Transportation and Infrastructure, Senate Committee on Environment and Public Works, May 16, 2000.

⁸ In addition to authorizing planning and construction projects, Congress uses WRDA to establish policies for the Corps’ civil works projects, such as cost-sharing requirements.

⁹ Local cost-sharing for the feasibility phase is not required for studies of navigation improvements to the inland waterway system (see 33 U.S.C. 2215 a[2]).

¹⁰ Information on the ability-to-pay test used for flood control projects is available in *Flood-Control Cost-Sharing Requirements Under the Ability-to-Pay Provision* (Engineer Regulation 1165-2-121) available at [<http://www.usace.army.mil/publications/army-reg/>].

Table 1. Current Cost-Share Requirements for Corps Projects

Project Purpose	Maximum Federal Share of Construction	Maximum Federal Share of O&M
Commercial Navigation Coastal Ports — <20 ft. harbor 20-45 ft. harbor >45 ft. harbor Inland Waterways	90%* 75%* 50%* 100%**	100% 100% 50% 100%
Flood Control	65%	0%
Hydroelectric Power	0%	0%
Municipal and Industrial Water Supply	0%	0%
Agricultural Water Supply	65%***	0%
Recreation	50%	0%
Hurricane and Storm Damage Reduction (except Periodic [Beach] Nourishment)	65% (50%)	0% (0%)
Aquatic Plant Control	not applicable	50%
Environmental Restoration Congressionally Authorized Projects Beneficial Uses of Dredged Material and Modification for Improvement of Environment	65% 75%	0% 0%

Source: 33 U.S.C. 2211-2215.

* In addition, the non-federal sponsors pay 10% of the cost of the general navigation features of the project over a period not to exceed 30 years.

** 50% is paid by federal appropriations, and 50% by the Inland Waterway Trust Fund.

*** For the 17 western states where reclamation law applies, irrigation costs are funded by the Corps but ultimately repaid by non-federal users.

Evolution of Civil Works Mission

Navigation and Flood Control (1802-1950s). In the 19th Century, the Corps' mission evolved into civil and military building for the nation. In 1824, Congress passed legislation using military engineers for planning roads and canals to move goods and people. In 1850, Congress directed the Corps to engage in its first planning exercise — flood control for the lower Mississippi River. The modern era of federal flood control emerged with the Flood Control Act of 1936 (P.L. 74-738), which declared flood control as a "proper" federal activity and in the national interest. During the 1920s, Congress expanded the Corps' ability to incorporate hydropower into multi-purpose projects and authorized the agency to undertake comprehensive surveys to establish river-basin development plans.

The 1944 Flood Control Act (33 U.S.C. 708) significantly augmented the Corps' involvement in large multi-purpose projects. The Flood Control Act of 1950 (33 U.S.C. 701n) began the Corps' emergency operations through authorization for flood preparedness and emergency operations.¹¹ The Water Supply Act of 1958 (43 U.S.C. 390b) gave the Corps authority to include storage for municipal and industrial water supply in reservoir projects at 100% local cost.

Changing Priorities (1960-1986). By the late 1960s, construction of major water works had declined. Changing national priorities and local needs, increasing construction costs, and completed projects at most prime locations decreased the attractiveness of water projects. Water supply for traditional off-stream uses, such as domestic, commercial, industrial, and agricultural uses, was increasingly in direct competition with in-stream uses, such as recreation, fisheries, and wildlife habitat. From 1970 to 1985, Congress authorized no major water projects, scaled back several authorized projects, and passed laws that altered project operations and water delivery programs to protect the environment. The 1970s marked a transformation in Corps project planning. The 1969 National Environmental Policy Act and the Endangered Species Act of 1973 (16 U.S.C. 1531) required the Corps to consider environmental impacts, increase public participation in planning, and consult with other federal agencies. Executive orders (EO 11988 and EO 11990) united the goals of reducing flood losses and environmental damage by recognizing the value of wetlands and required federal agencies to evaluate potential effects of actions on flood plains and to minimize impacts on wetlands.

Environmental Mission and Local Responsibility (1986-present). Congress fundamentally transformed the ground rules for Corps water project planning and funding through WRDA 1986 (33 U.S.C. 2211) by establishing new cost-share formulas, resulting in greater financial and decision-making roles for local stakeholders. WRDA 1986 reestablished the tradition of a biennial omnibus authorization bill. Congress has since enacted WRDAs in 1988, 1990, 1992, 1996, 1999, and 2000. WRDA 1986 also provided the Corps with authority to determine if changes can be made in existing structures or operations to improve environmental quality. WRDA 1990 (33 U.S.C. 1252, 2316) explicitly expanded the Corps' mission to include environmental protection and increased the Corps' responsibility for contamination cleanup, dredged material disposal, and hazardous waste management. WRDA 1992 (33 U.S.C. 2326) authorized the Corps to use the "spoils" from dredging in implementing projects for protecting, restoring, and creating aquatic and ecologically-related habitats, including wetlands. WRDA 1996 (33 U.S.C. 2330) gave the Corps the authority to undertake aquatic ecosystem restoration projects. While the Corps has been involved with numerous environmental restoration projects in recent years, WRDA 2000 approved a restoration program for the Florida Everglades that represented the agency's first multi-year, multi-billion dollar effort of this type. These legislative changes have given the Corps environmental responsibility beyond its traditional water resources development projects.

¹¹ Emergency response activities are also conducted under the Disaster Relief Act of 1974 (42 U.S.C. 5121), also known as the Stafford Disaster and Emergency Assistance Act.